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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/684,927	10/10/2000	Hideki Usuki	DAIN: 563	2321

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EXAMINER

XU, LING X

ART UNIT

PAPER NUMBER

1774

DATE MAILED: 02/15/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/684,927	USUKI ET AL. 
Examiner	Art Unit	
Ling X. Xu	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 10 October 2000.

2a) This action is **FINAL**.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-9 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-9 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) Notice of References Cited (PTO-892)      4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_ .

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)      5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.      6) Other: \_\_\_\_\_

**DETAILED ACTION**

***Specification***

1. The disclosure is objected to because of the following informalities: on page 9, line 19, the disclosed method for measuring the coefficients of friction, JIS P 8147, is not provided. The description of the method or a copy of the method JIS P 8147 is required in the specification.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 4, it is unclear how the thermally transferable protective layer can be "releasably" provided on the substrate. It is also unclear whether "a part of the surface of the substrate sheet remote from the heat-resistant slip layer" is referred to the surface of the substrate sheet on the same or different side from the heat-resistant slip layer.

Claim 1 recites the limitation "the surface of the protective layer and the surface of the image-receiving sheet" in line 6. There is insufficient antecedent basis for "the image-receiving sheet" in the claim. It is also unclear whether the protective layer is

referred to the protective layer transfer sheet or the thermally transferable protective layer.

In claim 4, a broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 4 recites the broad limitation that the content of the microsilica is 0.1 to 10% following by a narrow range of "more preferably 3 to 5%" in the same claim.

In claim 5, "Coulter counter method" is not defined in the specification.

Claim 8 recites the limitation "the release layer" in line 2. There is insufficient antecedent basis for this limitation in the claim. It is also unclear if the protective layer is the same as the thermal transferable protective layer.

***Claim Rejections - 35 USC § 102/103***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-6 and 8-9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Oshima et al. (US 5,427,997).

Oshima discloses that a heat transfer sheet comprises (See Fig. 1):

- a release layer;
- a transparent resin layer made of resins such as polyester, acrylic, epoxy resins (Col. 4, lines 45-55);
- a substrate film;
- a back layer (Col. 4, lines 20-25) or a heat-resistant slip layer (Col. 21, lines 25-32)

Oshima also discloses that particles of high transparency such as silica, alumina can be added to the resin layer. The preferable amount of such particles is ranging

from 10-200 parts by weight per 100 parts by weight of the total resin and with particle submicron or a few  $\mu\text{m}$  (Col. 5, lines 30-40).

Oshima further discloses that the release layer is not transferable and the resin layer is releasable from the substrate film (Col. 2, lines 10-20).

Oshima discloses the heat transfer cover film has the same structure as the claimed protective layer transfer sheet and contains microsilica within the same range as claimed. As disclosed in the specification, the incorporation of microsilica into the protective layer can satisfy a requirement such that the coefficient of friction between the surface of the protective layer and the surface of the image-receiving sheet before thermal transfer is 0.05 to 0.5 in terms of  $\mu_0$  and  $\mu$  with the value of  $\mu_0/\mu$  being 1.0 to 1.5. Accordingly, Oshima's heat transfer cover film will inherently have the same properties of the coefficient of static friction and dynamic friction between the surface of the protective layer and the image-receiving sheet or, in the alternative, it would have been obvious to one of ordinary skill in the art to use the claimed protective layer transfer sheet with the expectation that Oshima's heat transfer film has the same structure and composition as claimed will also have the same properties.

Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the

prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

4. Claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshima et al., as applied to claim 1 above, and further in view of Kanto et al. (US 5,134,112).

As stated above, Oshima discloses that a heat transfer sheet comprises (See Fig. 1), a release layer made of acrylic resin (Col. 5, lines 45-55), a transparent resin layer made of polyester resin, an adhesive layer made of polyester resins, a substrate film and a back layer or a heat-resistant slip layer.

Oshima does not disclose that the transparent resin layer having an adhesive layer contains the microsilica.

Kanto teaches by incorporating fine particles into the adhesive layer can reduce the coefficient of friction of its surface (Col. 6, lines 10-20). Examples of fine particles are silica (microsilica, because the thickness of the adhesive layer is on the order of a few  $\mu\text{m}$ ) (Col. 4, lines 12-20). Kanto also teaches that the addition of such inorganic fine particles in the range of 0.01 to 10% by weight makes it possible to reduce the coefficient of friction of the surface of the adhesive layer (Col 4, lines 12-20).

Therefore, it would have been obvious to one of ordinary skill in the art to add microsilica into the adhesive layer in order to reduce the coefficient of friction of the surface of the adhesive layer, as taught by Kanto.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling X. Xu whose telephone number is 703-305-0395.

The examiner can normally be reached on 8:00 - 4:30 Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on 703-308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

CYNTHIA H. KELLY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700

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February 7, 2002

